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| 10/526,767   | 11/03/2005  | Martina Ebert        | STOPPELMANN1                 | 6941                   |
| 1444 7590 11/25/2009<br>BROWDY AND NEIMARK, P.L.L.C.<br>624 NINTH STREET, NW<br>SUITE 300<br>WASHINGTON, DC 20001-5303 |             |                      | EXAMINER<br>USELDING, JOHN E |                        |
|  |             |                      | ART UNIT<br>1796             | PAPER NUMBER           |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                     |  |
|------------------------------|--------------------------------------|-------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/526,767 | <b>Applicant(s)</b><br>EBERT ET AL. |  |
|                              | <b>Examiner</b><br>John Uselding     | <b>Art Unit</b><br>1796             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 September 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 13-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 13-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-8 and 13-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Applicant has claimed that the chalk is uncoated. A molding compound containing chalk and polyamide will inherently have the polyamide “coating” the chalk. This is the same argument that the Applicant has used for the olefin compound coating the chalk of Kumaki et al. (arguments filed 11/20/2008 page 11). The mineral filler cannot be identified as uncoated under the Applicant’s own definition. For the purposes of applying prior art the claims are being interpreted that the chalk, when it is added, is uncoated. Therefore it is a product by process limitation. Once the chalk is in the composition it is then coated. Consequently, there no structural difference between adding a chalk in a coated or in an uncoated state because they both end up being considered “coated” in the composition.

### ***Claim Interpretation***

The limitation “precipitated” refers to the manner in which the chalk was produced and is therefore a product by process limitation. Process limitations in product claims are not limited to the manipulations of the recited steps, only the

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structure implied by the steps. "In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985). Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the *prima facie* case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. *In re Best*, 562 F.2d at 1255, 195 USPQ at 433. See also *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumaki et al. (EP 0863180).

Kumaki et al. teach a composition comprising nylon 66/6T/6I (page 3, line 26), which meets the polyamide limitations, and Kumaki et al. teach using calcium carbonate

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fillers that have an average particle size of as low as 50 nm (page 3, lines 35-38). It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the overlapping portion of the range that was below 80 nm and 70 nm since it has been held that choosing the overlapping portion, of the range taught in the prior art and the range claimed by the applicant, has been held to be a *prima facie* case of obviousness, see *In re Malagari*, 182 USPQ 549. The calcium carbonate of Kumaki et al. is not required to be coated. Although Kumaki does teach that it can be coated it is not required to be coated. Patents are relevant prior art for all that they contain and not just the preferred embodiments. "The use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain." *In re Heck*, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting *In re Lemelson*, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)). See MPEP 2123.

Claims 1-5 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumaki et al. (EP 0863180).

Regarding claims 1, 3, 13, and 14: Kumaki et al. teach a composition comprising nylon 66/6T/6I (page 3, line 26), which meets the polyamide limitations, and Kumaki et al. teach using calcium carbonate fillers that have an average particle size of as low as 50 nm (page 3, lines 35-38). It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the overlapping portion of the range that was below 100 nm, 90 nm, 80 nm, and 70 nm since it has been held that choosing the overlapping portion, of the range taught in the prior art and the range claimed by the

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applicant, has been held to be a *prima facie* case of obviousness, see *In re Malagari*, 182 USPQ 549. The calcium carbonate of Kumaki et al. is not required to be coated.

Although Kumaki does teach that it can be coated it is not required to be coated.

Patents are relevant prior art for all that they contain and not just the preferred embodiments. "The use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned.

They are part of the literature of the art, relevant for all they contain." *In re Heck*, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting *In re Lemelson*, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)). See MPEP 2123. While Kumaki et al. does not teach whether the chalk was precipitated or not it is a product by process limitation.

Regarding claim 2: Kumaki et al. teach using 5-60% inorganic filler (page 2, line 45). They teach embodiments that use less than 40% of inorganic filler (Table 1).

Regarding claim 4: Kumaki et al. teach that their polyamide can be made from monomers of hexamethylene diamine and aromatic carboxylic acids such as terephthalic acid and isophthalic acid (page 3, lines 6-19).

Regarding claim 5: Kumaki teach the dicarboxylic acids terephthalic acid and isophthalic acid (page 3, lines 6-19 and 26). They, however, fail to teach the ratio of dicarboxylic acids used. It would have been obvious to try any ratio, including 70/30, given that there is a finite number of ratios available and expect them all to function in the same or a similar capacity. It would have been obvious to have optimized the ratio for a desired glass transition temperature, melting point, and adsorption of moisture and solvents.

Claim 6 is are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumaki et al. (EP 0863180) as applied to claim 1 above further in view of Mordecai et al. (5,965,655).

A blank is any piece of material waiting to be made into something. Kumaki injection mold their composition in a material that can then be made into various external automobile products (page 6, lines 1-18). This intermediate material is considered a blank.

Kumaki et al. fail to teach using a polished mold surface.

However, Mordecai et al. teach making exterior automobile parts (column 1, lines 35-38) comprising molding polyamide resins (column 9, line 62 to column 10 line 44) and mineral fillers (column 2, lines 13-15). They teach using a polished mold surface (column 12, lines 45-48) so that the exterior automobile parts have a polished surface.

Mordecai et al. and Kumaki et al. are analogous art because both are concerned with the same field of endeavor, namely making automobile exterior parts from compositions comprising polyamide and mineral fillers. At the time of the invention, a person having ordinary skill in the art would have found it obvious to combine the polished mold surface, as disclosed by Mordecai et al., with the molding method as disclosed by Kumaki et al. and would have been motivated to do so in order to produce exterior automotive parts with polished surfaces.

Since the composition is the same as claimed and a polished mold surface is used it will have the same physical properties that have been claimed. The courts have

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stated that a chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 15 USPQ2d 1655, (Fed. Cir. 1990). See also *In re Best*, 562 F.2d 1252, 195 USPQ 430, (CCPA 1977).

"Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established." Further, if it is the applicant's position that this would not be the case: (1) evidence would need to be provided to support the applicant's position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties with only the claimed ingredients.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kumaki et al. (EP 0863180) in view of either Yasue et al. (5,414,042) or Umetsu et al. (6,121,388).

This claim includes product by process limitations. Process limitations in product claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. " *In re Thorpe* , 227 USPQ 964, 966 (Fed. Cir. 1985). Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709,



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15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the *prima facie* case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. *In re Best*, 562 F.2d at 1255, 195 USPQ at 433. See also *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985).

While Kumaki et al. teach using their composition to make exterior vehicle parts they fail to teach specifically using it for vehicle reflectors. Yasue et al. teach reinforced polyamide resin compositions that are used to make vehicle reflectors (column 6, line 41). They teach using similar polyamides as Kumaki et al. (column 2, lines 57-68) and calcium carbonate (column 5, lines 56-57). Similarly, Umetsu et al. teach reinforced polyamide resin compositions that are used to make vehicle reflectors (column 12, lines 46-63). They teach using similar polyamides as Kumaki (column 3, lines 27-59) and calcium carbonate (column 9, lines 66-67). Yasue et al. or Umetsu et al. and Kumaki et al. are analogous art because both are concerned with the same field of endeavor, namely polyamide and calcium carbonate compositions for exterior vehicle parts. At the time of the invention, a person having ordinary skill in the art would have found it obvious make vehicle reflectors, as disclosed by Yasue et al. or Umetsu et al., with the composition as disclosed by Kumaki et al. and would have been motivated to do so in order to make reflectors that are excellent in rigidity and toughness and particularly excellent in tensile elongation, high-speed surface impact fracture characteristic and achieve excellent surface external appearance and dimensional stability of formed articles in good balance.

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Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tahara et al. (6,165,407) in view of Kumaki et al. (EP 0863180).

Tahara et al. teach a method of making a vehicle head lamp reflector (column 24, lines 33-40) that is metallized directly by applying a metal coating through PVD (column 23, lines 34-39). The molded article constituting the reflector part is made using partially crystalline polyamide and calcium carbonate as a filler (column 24, lines 37-39, column 19, line 21, column 20, lines 9-10 and 65).

Tahara et al. fails to teach a polyamide that is partially aromatic and the particle size of the calcium carbonate.

Kumaki et al. teach what is listed above.

Since Kumaki et al. teach a calcium carbonate reinforced polyamide in the same field of endeavor it would have been obvious to one of ordinary skill in the art at the time of the invention to have used the polyamide and calcium carbonate of Kumaki et al. in the molding composition of Tahara et al. to make vehicle head lamp reflectors that are excellent in rigidity and toughness and particularly excellent in tensile elongation, high-speed surface impact fracture characteristic and achieve excellent surface external appearance and dimensional stability of formed articles in good balance. This is a simple substitution of one known element for another to obtain predictable results. Since the molding composition and method of making the reflector are the same as claimed this combination would provide a reflector with the same physical properties such as an iridescence temperature above 220°C.

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Claims 1-4, 6, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umetsu et al. (6,121,388) in view of Dupuis et al. (6,093,487).

Regarding claims 1, 3, 13, and 14: Umetsu et al. teach a molding composition preferably comprising nylon 6T/6I (column 3, lines 51-54). Umetsu et al. teach that the composition comprises calcium carbonate as a filler to improve the mechanical strength of the composition (column 9, lines 50-67).

Umetsu et al. fails to teach a calcium carbonate with the particle sizes as claimed.

However, Dupuis et al. teach a filler material that permits the impact strength and rigidity properties of plastic substrates to be conjointly reinforced (column 1, lines 39-43). It is an improvement over using just calcium carbonate (column 1, lines 21-30). The filler is a core/sheath polymer/calcium carbonate particle. The polymer is coated with calcium carbonate (column 2, lines 14-25). The calcium carbonate itself is not coated. Dupuis et al. teaches that the thickness of the calcium carbonate layer more preferably ranges from 5 to 70 nm (column 4, lines 32-36) and taught an embedment that was 5 nm (column 11, lines 39-40). If the thickness of the layer is 5 nm the particle size of the calcium carbonate must intrinsically be smaller than 70 nm. Dupuis et al. teach that their filler is used in polyamide compositions to increase the impact resistance (column 9, lines 19-25). The calcium carbonate is precipitated (column 5, lines 45-51).

Dupuis et al. and Umetsu et al. are analogous art because both are concerned with the same field of endeavor, namely polyamide molding composition comprising calcium carbonate to improve impact strength. At the time of the invention, a person

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having ordinary skill in the art would have found it obvious to use the calcium carbonate, as disclosed by Dupuis et al., with the calcium carbonate as disclosed by Umetsu et al. and would have been motivated to do so in order to because it provides superior performance to calcium carbonate and permits the impact strength and rigidity properties of plastic substrates to be conjointly reinforced.

Regarding claim 2: Umetsu et al. teach using 20 to 150 parts by weight of their filler. It is obvious to optimize the amount of filler for a desired mechanical strength. It is a result effective variable. See MPEP 2144.05.

Regarding claim 4: Umetsu et al. teach a molding composition preferably comprising nylon 6T/6I (column 3, lines 51-54).

Regarding claim 6: A blank is any piece of material that can be made into something. Umetsu et al. mold their composition into vehicle lamp reflectors (column 12, lines 56-65). Since the composition of Umetsu et al. combined with Dupuis et al. is the same as claimed it will have the same physical properties that have been claimed. The courts have stated that a chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. In re Spada, 911 F.2d 705, 15 USPQ2d 1655, (Fed. Cir. 1990). See also In re Best, 562 F.2d 1252, 195 USPQ 430, (CCPA 1977). "Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established." Further, if it is the applicant's position that this would not be the case: (1) evidence would need to be provided to support the applicant's position; and (2) it would

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be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties with only the claimed ingredients.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Umetsu et al. (6,121,388) in view of Dupuis et al. (6,093,487) as applied to claims 1 and 4 above as evidenced by Salamone (Polymeric Materials Encyclopedia).

Umetsu et al. fails to teach the ratio of the dicarboxylic acids used. The claimed ratio is intrinsically within the range of PA 6T/6I. Salamone is being used as evidence to show that PA 6T/6I has a terephthalic acid percentage of 60-80% and an isophthalic percentage of 40-20% (page 6574). It would have been obvious to one of ordinary skill in the art to try any ratio, including 70/30, given that there is a finite number of ratios available and would expect them all to function in the same or similar capacity. It would have been obvious to have optimized the ratio for a desired glass transition temperature, melting point, and adsorption of moisture and solvents.

Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umetsu et al. (6,121,388) and Dupuis et al. (6,093,487) as applied to claim 1 above further in view of Tahara et al. (6,165,407).

These are product by process claims. Process limitations in product claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. "In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985). Where the claimed and prior art products are identical or substantially identical in structure or composition, or

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are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the *prima facie* case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. *In re Best*, 562 F.2d at 1255, 195 USPQ at 433. See also *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985).

Umetsu et al. and Dupuis et al. teach what is listed above.

Umetsu et al. fail to teach a method of making their vehicle reflectors.

Tahara et al. teach a method of making a vehicle head lamp reflector (column 24, lines 33-40) that is metallized directly by applying a metal coating through PVD (column 23, lines 34-39). The molded article constituting the reflector part is made using partially crystalline polyamide and calcium carbonate as a filler (column 24, lines 37-39, column 19, line 21, column 20, lines 9-10 and 65).

Since the compositions are similar it would have been obvious to one of ordinary skill in the art at the time the invention was made to have looked to the prior art for a method of making a reflector and to have used the method of Tahara et al. to make the vehicle reflector of Umetsu et al.

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Since the method of making the molding composition and method of making the reflector are the same this combination would provide a reflector with the same physical properties such as an iridescence temperature above 220°C.

Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umetsu et al. (6,121,388) in view of Dupuis et al. (6,093,487).

Umetsu et al. teach a molding composition preferably comprising nylon 6T/6I (column 3, lines 51-54). Umetsu et al. teach that the composition comprises calcium carbonate as a filler to improve the mechanical strength of the composition (column 9, lines 50-67).

Umetsu et al. fails to teach a calcium carbonate with the particle sizes as claimed.

However, Dupuis et al. teach a filler material that permits the impact strength and rigidity properties of plastic substrates to be conjointly reinforced (column 1, lines 39-43). It is an improvement over using just calcium carbonate (column 1, lines 21-30). The filler is a core/sheath polymer/calcium carbonate particle. The polymer is coated with calcium carbonate (column 2, lines 14-25). The calcium carbonate itself is not coated. Dupuis et al. teaches that the thickness of the calcium carbonate layer more preferably ranges from 5 to 70 nm (column 4, lines 32-36) and taught an embedment that was 5 nm (column 11, lines 39-40). If the thickness of the layer is 5 nm the particle size of the calcium carbonate must intrinsically be smaller than 70 nm. Dupuis et al. teach that their filler is used in polyamide compositions to increase the impact resistance (column 9, lines 19-25).

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Dupuis et al. and Umetsu et al. are analogous art because both are concerned with the same field of endeavor, namely polyamide molding composition comprising calcium carbonate to improve impact strength. At the time of the invention, a person having ordinary skill in the art would have found it obvious to use the calcium carbonate, as disclosed by Dupuis et al., with the calcium carbonate as disclosed by Umetsu et al. and would have been motivated to do so in order to because it provides superior performance to calcium carbonate and permits the impact strength and rigidity properties of plastic substrates to be conjointly reinforced.

Claims 1-4, 6, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umetsu et al. (6,121,388) in view of Takagi et al. (5,001,181).

Regarding claims 1 and 4: Umetsu et al. teach a molding composition preferably comprising nylon 6T/6I (column 3, lines 51-54). Umetsu et al. teach that the composition comprises calcium carbonate as a filler to improve the mechanical strength of the composition (column 9, lines 50-67).

Umetsu et al. fails to teach that the calcium carbonate is precipitated calcium carbonate with the particle sizes as claimed. Since Umetsu et al. is silent with respect to the particular type and size of calcium carbonate used the skilled artisan would look to the prior art to find a suitable calcium carbonate to provide impact strength to a composition comprising polyamide.

Takagi et al. teach that precipitated calcium carbonate is a type of calcium carbonate that can be advantageously used in polyamide molding compositions because it is in particulate form (column 7, lines 42-49). Takagi et al. teach that the



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precipitated calcium carbonate filler preferably has an average particle size of 50-300 nm because the smaller sizes further enhance the balance in physical properties of rigidity and impact strength (column 7, lines 10-23). They teach using an inorganic filler with an average particle size of 100 nm (example 2).

Takagi et al. and Umetsu et al. are analogous art because both are concerned with the same field of endeavor, namely polyamide and calcium carbonate molding compositions. At the time of the invention, a person having ordinary skill in the art would have found it obvious to use the calcium carbonate, as disclosed by Takagi et al., as the calcium carbonate in the composition of Umetsu et al. and would have been motivated to do so in order to further enhance the balance in physical properties of rigidity and impact strength. It would have been obvious to select an average particle size of 100nm or less because the smaller sizes to further enhance the balance in physical properties of rigidity and impact strength in polyamide compositions.

Regarding claim 2: Umetsu et al. teach using 20 to 150 parts by weight of their filler. It is obvious to optimize the amount of filler for a desired mechanical strength. It is a result effective variable. See MPEP 2144.05.

Regarding claims 3, 13, and 14: The range taught by Takagi et al. overlaps the claimed ranges. The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made, since it has been held that choosing the overlapping portion, of the range taught in the prior art and the range claimed by the applicant, has been held to be a *prima facie* case of obviousness, see *In re Malagari*, 182 USPQ 549. It would have been obvious to select an average particle

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sizes of 70 nm or less because the smaller sizes to further enhance the balance in physical properties of rigidity and impact strength in polyamide compositions.

Regarding claim 6: A blank is any piece of material that can be made into something. Umetsu et al. mold their composition into vehicle lamp reflectors (column 12, lines 56-65). Since the composition of Umetsu et al. combined with Takagi et al. is the same as claimed it will have the same physical properties that have been claimed or the applicant has failed to claim a critical feature that is need to obtain the properties. The courts have stated that a chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. In re Spada, 911 F.2d 705, 15 USPQ2d 1655, (Fed. Cir. 1990). See also In re Best, 562 F.2d 1252, 195 USPQ 430, (CCPA 1977). "Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established." Further, if it is the applicant's position that this would not be the case: (1) evidence would need to be provided to support the applicant's position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties with only the claimed ingredients.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Umetsu et al. (6,121,388) and Takagi et al. (5,001,181) as applied to claims 1 and 4 above as evidenced by Salamone (Polymeric Materials Encyclopedia).

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Umetsu et al. fails to teach the ratio of the dicarboxylic acids used. The claimed ratio is intrinsically within the range of PA 6T/6I. Salamone is being used as evidence to show that PA 6T/6I has a terephthalic acid percentage of 60-80% and an isophthalic percentage of 40-20% (page 6574). It would have been obvious to one of ordinary skill in the art to try any ratio, including 70/30, given that there is a finite number of ratios available and would expect them all to function in the same or similar capacity. It would have been obvious to have optimized the ratio for a desired glass transition temperature, melting point, and adsorption of moisture and solvents.

Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umetsu et al. (6,121,388) and Takagi et al. (5,001,181) as applied to claim 1 above further in view of Tahara et al. (6,165,407).

These are product by process claims. Process limitations in product claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. "In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985). Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the *prima facie* case can be rebutted by evidence showing that the prior art products do not necessarily possess the

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characteristics of the claimed product. *In re Best*, 562 F.2d at 1255, 195 USPQ at 433. See also *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985).

Umetsu et al. and Takagi et al. teach what is listed above.

Umetsu et al. fails to teach a method of making their vehicle reflectors.

Tahara et al. teach a method of making a vehicle head lamp reflector (column 24, lines 33-40) that is metallized directly by applying a metal coating through PVD (column 23, lines 34-39). The molded article constituting the reflector part is made using partially crystalline polyamide and calcium carbonate as a filler (column 24, lines 37-39, column 19, line 21, column 20, lines 9-10 and 65).

Since the compositions are similar it would have been obvious to one of ordinary skill in the art at the time the invention was made to have looked to the prior art for a method of making a reflector and to have used the method of Tahara et al. to make the vehicle reflector of Umetsu et al.

Since the method of making the molding composition and method of making the reflector are the same this combination would provide a reflector with the same physical properties such as an iridescence temperature above 220°C. The courts have stated that a chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 15 USPQ2d 1655, (Fed. Cir. 1990). See also *In re Best*, 562 F.2d 1252, 195 USPQ 430, (CCPA 1977). "Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima

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facie case of either anticipation or obviousness has been established." Further, if it is the applicant's position that this would not be the case: (1) evidence would need to be provided to support the applicant's position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties with only the claimed ingredients.

Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umetsu et al. (6,121,388) in view of Takagi et al. (5,001,181).

Umetsu et al. teach a molding composition preferably comprising nylon 6T/6I (column 3, lines 51-54). Umetsu et al. teach that the composition comprises calcium carbonate as a filler to improve the mechanical strength of the composition (column 9, lines 50-67).

Umetsu et al. fails to teach that the calcium carbonate is precipitated calcium carbonate with the particle sizes as claimed. Since Umetsu et al. is silent with respect to the particular type and size of calcium carbonate used the skilled artisan would look to the prior art to find a suitable calcium carbonate to provide impact strength to a composition comprising polyamide.

Takagi et al. teach that precipitated calcium carbonate is a type of calcium carbonate that can be advantageously used in polyamide molding compositions because it is in particulate form (column 7, lines 42-49). Takagi et al. teach that the precipitated calcium carbonate filler preferably has an average particle size of 50-300 nm because the smaller sizes further enhance the balance in physical properties of rigidity and impact strength (column 7, lines 10-23).

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Takagi et al. and Umetsu et al. are analogous art because both are concerned with the same field of endeavor, namely polyamide and calcium carbonate molding compositions. At the time of the invention, a person having ordinary skill in the art would have found it obvious to use the calcium carbonate, as disclosed by Takagi et al., as the calcium carbonate in the composition of Umetsu et al. and would have been motivated to do so in order to further enhance the balance in physical properties of rigidity and impact strength. The range of Takagi et al. overlaps the claimed ranges of the particle size. The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made, since it has been held that choosing the overlapping portion, of the range taught in the prior art and the range claimed by the applicant, has been held to be a *prima facie* case of obviousness, see *In re Malagari*, 182 USPQ 549. It would have been obvious to select an average particle size of 70 nm or less because the smaller sizes to further enhance the balance in physical properties of rigidity and impact strength in polyamide compositions.

### ***Response to Arguments***

Applicant's arguments filed 9/3/2009 have been fully considered but they are not persuasive.

The Applicant has argued that coating refers to surface treatment. Since the Applicant has not defined the word "coating" in the specification it is open to any reasonable interpretation. It is admitted that surface treatment is a reasonable interpretation of the word "coating" but it is not the only one. The Applicant cannot rely

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on a definition outside of their specification that relates to a particular type of coating (surface treatment) to restrict the term "coating". Other reasonable interpretations may apply to the term. The definition the Office has been using is also a reasonable interpretation as evidenced by the fact that the Applicant has used it in their arguments regarding the olefin compound coating the chalk of Kumaki et al. (arguments filed 11/20/2008 page 11). Given that definition the polyamide will be "coating" the chalk in the molding compound.

The Applicant has alleged unexpected results of a high-gloss surface. This is not persuasive for the following reasons:

1) The data is not commensurate in scope with the claims. The data provided is for a specific polyamide and calcium carbonate with a particle size of 70 nm in a range of from 30 to 40 weight percent. The claims are much broader.

2) The comparative examples are not true comparisons because the amount of calcium carbonate is only 20% of the composition whereas in the inventive examples it is used in amounts of 30-40%, which is 50-100% more calcium carbonate.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). The skilled artisan would be motivated to look to the prior art for a suitable

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calcium carbonate because Umetsu et al. doesn't teach what particle size to use. Instead of taking the time to try any particle size available the skilled artisan would be motivated to look to the prior art to see what sizes have been used advantageously in polyamide molding compositions.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the inorganic filler is not dispersed in the polyamide resin) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The claims do not require that the filler is dispersed in the polyamide resin.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of



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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Uselding whose telephone number is (571)270-5463. The examiner can normally be reached on Monday-Thursday 6:00am-4:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on 571-272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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